ABSTRACT OF THE DISCLOSURE

The invention provides an X-ray crystal structure of the 30S ribosome, obtained from *Thermus thermophilus* 30S subunit, having a tetragonal space group $P4_12_12$ with unit cell dimensions of a = 401.4 ± 4.0Å, b = 401.4 ± 4.0Å, c = 175.9 ± 5.0Å. An advantageous feature of the structure is that it diffracts beyond 3Å resolution. The invention also provides a crystal of 30S having the three dimensional atomic coordinates of the 30S ribosome, the coordinates being provided in Tables 1A and 1B. The data may be used for the rational design and modelling of inhibitors for the 30S ribosome, which have potential use as antibiotics.